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Today—Evaluation

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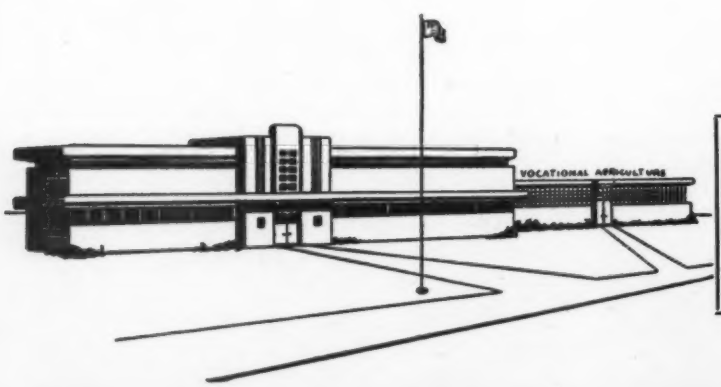
Contents



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Editorials

Let's Evaluate the Learner

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Mississippi State University

Over the years much time has been spent in evaluating local programs of vocational education in agriculture. It has been inferred that programs or phases of programs can be rated as superior, average, inferior, et cetera, by using certain evaluative criteria. This approach to evaluation does not infer that the learners, who are products of these programs, will likewise be superior, average, or inferior. In many cases programs or phases of programs have been evaluated in terms of situations or conditions prevailing. It is agreed that all phases of programs in vocational education in agriculture should be evaluated periodically, but more important is the evaluation of the learners who are products of these programs.

When it comes to evaluation of the learners in vocational agriculture programs, the terms evaluation, appraisal, and measurement often become confused. For practical purposes, evaluation and appraisal may be considered as synonymous terms. Evaluation as used here is a much broader term than measurement. Measurement is often limited to instruments which are precise and quantitative aspects of evaluation, usually some type of test or examination, and the results are expressed in terms of a mark (A, B, C, et cetera) or a numerical score. Evaluation, on the other hand, is a complete diagnosis of the worth of the instructional program. It involves, among other things, determining how much change has been brought about in learner behavior. This being true, it is obvious that the "doings" of the individuals in the program will rate the effectiveness of the program. At least it can be said with a degree of certainty that public opinion will be formed from this viewpoint.

Perhaps no technique of evaluation is 100 per cent valid, reliable, and objective. Therefore, difficulties in evaluating the changes in the learner will be encountered, but this should not stop an earnest effort at evaluation.

The teachers of vocational agriculture are responsible for appraising or evaluating the changes brought about in those who are enrolled in vocational agriculture programs. The summation of these changes will give a public opinion rating to the total vocational agriculture program. If the changes result in better than average individual achievement, the program is viewed as worthwhile. Conversely, if there are no apparent changes either in the individuals or the "do-

(Continued on Page 268)

From the Editor's Desk

New Forms of Agricultural Education Needed? - - -

In addition to evaluating specific aspects of our vocational agriculture programs, we need to evaluate our concepts of a total program of agricultural education. What kinds of agricultural education should be provided in addition to vocational agriculture? What purposes should be served? What are the needs that are not now being met?

We often hear expressed the idea that all should have some agricultural education in order that they might properly make those decisions about agriculture that citizens are asked to make and so that they will have an understanding of the place and importance of agriculture in our economy. If we really wish to provide some agricultural education for everyone, we may as well recognize that we can probably accomplish this only through the development of definite proposals for the kinds and amounts of agricultural instruction to be included in the courses all students take at each of the many grade levels. It is unlikely that all students will enroll in an agriculture course unless it is made a required course.

A second purpose we hear discussed is that of acquainting all students with occupational opportunities in agriculture. A general exploratory course in agriculture at the junior high level offers definite possibilities. In some situations, the study of agricultural occupations could be a part of a general occupations course.

A third purpose for agricultural education is that of preparing persons for specific agricultural occupations. The vocational agriculture program, as presently designed, serves well those who need the skills and knowledge of farming. The diversified occupations and distributive education programs serve the needs of a limited number of persons interested in certain nonfarm agricultural occupations.

If there are other needs to be met, we need to offer new courses designed to meet these other needs. The new courses to be developed would be different for each community because of differences in needs and in current agricultural offerings. Examples of possibilities to consider, both as separate courses and in combinations, would be floriculture, landscaping, wildlife management, natural resource conservation, vegetable production, fruit production, forestry, ornamental plant culture, and farm management. Under some conditions, a course in agricultural mechanics might be well received. One school is con-

(Continued on Page 268)

Let's Evaluate the Learner

ings" of the individuals, the program is held ineffective. The teachers of vocational agriculture or anyone else who may attempt to evaluate learners in vocational agriculture programs must be familiar with good evaluation procedure which involves: (1) having a workable philosophy of vocational education in agriculture, (2) having objectives stated in terms of definite functions, (3) understanding what constitutes learning in vocational agriculture, and (4) developing and using effective techniques of measuring achievement.

Every vocational agriculture teacher has a philosophy of vocational education in agriculture. In some cases this philosophy is not good, but it is a philosophy nevertheless, and it does definitely influence how he evaluates those he teaches. Likewise, each teacher should have definite objectives that he hopes to reach in his instructional program. Usually a teacher who does not have objectives stated as definite functions with the in-school group will measure achievement by means of a written test and assign a grade of some type. This is the easiest way and perhaps the poorest of all attempts at evaluating the real worth of the vocational agriculture program to the learner. No teacher is stupid enough to try such a procedure with his adult groups. With these groups he will determine by various means of evaluation how much change has been brought about through instruction.

Perhaps if the primary basis of evaluating all learners in vocational agriculture were made in terms of their achieving objectives, we would be in position to see positively the degree to which the learner is actually being changed by the program of instruction. It is believed that each teacher of vocational agriculture has certain objectives, either expressed or implied, for his program. These objectives, together with a sound philosophy of vocational education in agriculture, are prerequisites to good evaluation procedure.

Teachers of vocational agriculture should use every available means to evaluate as accurately as possible the "doings" of the learners. Then, and only then, can it be said that the program of instruction in vocational agriculture is effective or ineffective. □

New Forms of Agricultural Education

sidering a course entitled "urban agriculture." These new courses would be supported by the community in the same manner as other general education courses and would be open to all who wished to enroll, boys and girls. The needs to be met would determine the level at which the instruction would be pitched.

If we wish to serve the agricultural interests of adults other than farmers, the new kinds of courses suggested for the senior high school offer many possibilities. We need only to make the courses available.

To serve the agricultural education needs of all the people, new courses with clearly defined purposes and content are needed in addition to the vocational agriculture offerings. Through such courses, an appreciation of agriculture in all of its aspects can be developed. The application of what we know about involving the people of the community in determining policies and programs for schools will help determine the specific agricultural education courses which are needed and which will succeed.

An examination of our concepts of total agricultural education programs might reveal some kinds of needs being overlooked. Unless we design courses to meet all of the needs for agricultural education in our communities, someone else will do it for us. □

School Administrators Look At Vocational Agriculture

R. J. AGAN, Teacher Education, Kansas State University

R. J. Agan

IF the school administrators were to set the principles for the operation of successful programs of vocational agriculture, would they change it much from the way it currently operates? Thirty-three school administrators in Kansas indicated that few, if any, changes would be made. The administrators were selected by a sampling from the list of departments of vocational agriculture deemed "successful" by the supervisory staff of the Kansas Board for Vocational Education.

The administrators of the successful departments of vocational agriculture averaged 12 years of tenure in their present position with an average of 24 years in school work. With four exceptions, their professional training had not included courses in the area of vocational education.

The departments of vocational agriculture had enrollments which averaged 34 pupils with a range of 22 to 52. The average tenure of the instructor was eight years and one-third had completed their master's degree. More than three-fourths of the departments offered a four year program rather than a three year program in vocational agriculture.

From the information supplied by the school administrators, a list of 24 principles was developed for the efficient administration of a department of vocational agriculture. These principles and the responses given by the administrators follow:

The Students Who Enroll

Principle 1. Vocational agriculture is an elective course.

There was a strong agreement among the school administrators as to the desirability of this principle, 22 rating it as desirable and 11 as highly desirable. Thirty-two administrators of the schools sampled were following the practice of offering vocational agriculture on an elective basis. Only one administrator was requiring all freshman boys to enroll in vocational agriculture. All 33 were in agreement that farm boys should not be enrolled in vocational agriculture merely because their homes were on farms.

Principle 2. Only students who have facilities for and are willing to conduct supervised farming programs are enrolled for vocational agriculture.

Only two of the 33 administrators interviewed failed to practice and agree to the desirability of this principle. Eleven felt that it was highly desirable to follow this principle and 20 felt it was desirable for the progress of the program of vocational agriculture.

The Instruction Offered

Principle 3. An area course of study for the local community is developed for vocational agriculture by the local teacher.

All 33 of the school administrators practiced and agreed to the desirability of this principle.

Principle 4. It is sometimes necessary for the teacher of vocational agriculture and his students to be away from the school campus to participate in vocational agriculture field studies and Future Farmers of America activities. Field studies are an essential part of the instruction in vocational agriculture.

All 33 administrators operated their schools on this principle. Only two felt that it was an undesirable practice. Most of the other administrators expressed a feeling that such a method of instruction could be overdone and that each teacher of vocational agriculture was responsible to see that the entire instructional program of the school was not too frequently disrupted because of field studies in vocational agriculture.

Principle 5. School owned and operated buses are available for transporting vocational agriculture students on field studies.

This principle was in practice in 21 of the 33 schools. Only two of the administrators felt that it was an undesirable principle. The same two administrators expressed a feeling of undesirability toward both Principles 4 and 5. Of the twelve who were not practicing the principle of providing buses for transportation on field studies, ten responded that they felt it would be desirable to do so.

Principle 6. Farm mechanics makes up 40 per cent of the instruction in vocational agriculture.

Thirty-two administrators indicated that this principle was being practiced in the departments of vocational agriculture in their schools. One did not answer. All but one felt that it was a desirable percentage of the instruction to devote to farm mechanics.

The Future Farmer Chapter

Principle 7. A Future Farmers of America Chapter is organized in the school as a part of the department of vocational agriculture.

Principle 8. A Future Farmers of America organization aids students of vocational agriculture to develop desirable leadership, social and civic interests and abilities and in the development of their vocational abilities and objectives.

All 33 school administrators seemed proud of the fact that the activities set out in Principles 7 and 8 were in current operation in their schools. All felt that they were desirable or highly desirable.

The Supervised Farming Program

Principle 9. The teacher of vocational agriculture visits his students on their home farms in order to supervise and help students with their supervised farming programs.

Principle 10. The teacher of vocational agriculture visits the homes of his students *at least* three times yearly and the time required for such visits is recognized as a part of his teaching load.

All 33 school administrators agreed that Principles 9 and 10 were a part of their current programs in vocational agriculture and that they were desirable to continue as a part of the instruction in vocational agriculture. Several administrators stated that they felt that three visits per year were inadequate for some of the students with larger supervised farming programs.

The Teaching Load

Principle 11. Teachers of vocational agriculture are employed on a 12-month basis, which includes one month of vacation taken at a time when it will least interfere with the welfare of the program.

All 33 school administrators were following this principle of employing teachers of vocational agriculture. Only one indicated that he felt it was undesirable.

Principle 12. The teacher of vocational agriculture conducts a total program in vocational agriculture including at least three day classes, a young farmer class and an adult farmer class.

Twenty-eight of the 33 school administrators said that they believed this principle to be a desirable one. Only four thought it undesirable and one withheld his answer. In practice, however, only eight were able to put the program outlined into practice. The concept of the administrators regarding what constituted a desirable program was more complete than that which they were able to put into the educational program of the school.

Principle 13. The weekly total vocational agriculture teacher's work load (including day classes, adult and young farmer classes) is equal to that of other teachers in the high school.

Thirty of the 33 administrators said that this principle was in effect in their schools. Only one felt that it was an undesirable principle. Several indicated that the work load of the teacher of vocational agriculture was heavier than that of other teachers.

Principle 14. Teachers of vocational agriculture handle pupil guidance as well as other teachers.

Principle 15. Teachers of vocational agriculture handle discipline as well as other teachers.

All 33 of the school administrators assigned pupil guidance and discipline duties to their teachers of vocational agriculture. They were unanimous in agreement that they were desirable principles to follow in making teaching assignments. There was some disagreement among the school administrators as to whether it took more skill to keep discipline in a class of vocational agriculture than a non-vocational class. Fifteen felt that more skill was required, 18 disagreed. All felt that it was desirable that discipline be kept and be the responsibility of the teacher in the classes of vocational agriculture.

The Adult Education Program

Principle 16. Classes for young farmer and/or adult farmers are organized and conducted as a part of the program of vocational agriculture.

Twenty-five of the 33 school administrators agreed to the desirability of the principle that young farmer and adult farmer classes were a regular part of the program of vocational agriculture. Eighteen schools were currently offering young farmer classes and 11 were currently offering adult farmer classes.

Principle 17. It is the responsibility of the regular instructor or instructors of vocational agriculture to teach young farmer and adult farmer classes.

This principle was the practice in each of the schools currently offering young farmer and adult farmer

classes. All but seven of the school administrators felt that it would be undesirable to have instructors other than the regular vocational agriculture instructors teach the class.

The Professional Teacher

Principle 18. Teachers are chosen for the position of vocational agriculture who are well qualified for teaching as are other teachers in the school system.

Principle 19. Teachers are chosen for the position of vocational agriculture who are as professional and cooperative as the other teachers in the school system in helping with extra-curricular school activities and community activities; in ethical relationships with the school board and school administrators; and in promoting the activities of professional teacher organizations.

All 33 administrators agreed that Principles 18 and 19 were desirable and all stated that the principles were currently in practice in their schools.

Principle 20. Teachers of vocational agriculture are employed at as high a monthly salary proportionally as the other teachers in the school.

Thirty-one of the 33 school administrators agreed that this principle was desirable and was currently a practice in their school systems.

The Administration of the Program

Principle 21. An agricultural advisory committee is appointed to work with the teacher of vocational agriculture and his administrator.

Twenty-six of the 33 school administrators felt that this principle was desirable. Nine reported advisory committees in current use in their program of vocational agriculture. One stated that there was an unofficial advisory committee set up by the local teacher to work with the program. Two stated that the school board took the place of the advisory committee.

Principle 22. The present program of vocational agriculture would be maintained in the high school even though it would be necessary to finance it entirely from local funds.

Thirty of the 33 school administrators stated that they believed this principle would be adopted if necessary in their school. Fourteen thought it would be desirable and 17 thought it would be undesirable to finance the program entirely from local funds. □

Opinions of School Administrators

Concerning the Vo-Ag Program

EARL S. WEBB, Teacher Education,
University of Missouri

What do school superintendents and high school principals think of vocational agriculture in Missouri? Answer: Many policies and practices are highly desirable and serve to advantage in the education of youth interested in agriculture. However, some changes are needed to improve the program according to a study[1] conducted in Missouri.

Major criticisms were grouped into the following seven areas:

1. Requirements for double periods.
2. Lack of respectability of course content.
3. Number of away-from-school activities.
4. High cost per student of the program.
5. Attitude of teachers.
6. Restrictions on the use of the teacher's time.
7. Programs of teachers during the summer months.

Double Periods

A rather uniform belief exists among administrators that little justification exists for double periods for classes of vocational agriculture. Reasons advanced in opposition to double periods were: (a) limits the number of electives students may take; (b) extra time in vocational agriculture tends to isolate students from the general school population; (c) scheduling double periods is extremely difficult in small schools.

Evidently most administrators are aware of the need for instruction in addition to a single class period. They suggested, therefore, that time spent on farming programs at home be considered as instruction, and that visits to the home farms of students be counted as a part of the student's class time.

Course Content

Agriculture is apparently believed to be an easy course to pass. Forty-two percent of the administrators indicated they believed students enroll in vocational agriculture to avoid taking other subjects. One administrator summed up the general criticism by commenting, ". . . students take agriculture to duck the stiffer academic subjects."

A course that is easy to pass is not necessarily without value. The ease with which students pass courses depends on their abilities and interests in the subject. However, it seems unfortunate that agriculture is considered a "snap" course, since it is a practical application of all the sciences. One administrator probably "spotlighted" the problem with the comment, "It seems to me that agriculture teachers scatter their work in so many directions that they realize very few basic accomplishments."

Related Activities

Seventy-five percent of the respondents in this study indicated that they believed contests were overemphasized in programs of vocational agriculture. It was also obvious that most other activities which cause students to be absent from school are undesirable.

Administrators consider the activities of the Future Farmers of America to be one of the chief sources of this problem. They apparently cannot see the relationship between many activities of FFA and the objective of becoming established in farming.

Cost of the Program

Criticisms concerning the high cost of the program stem mainly from the small number of students served. Administrators seem to believe that the space and equipment recommended for vocational agriculture is needed in order to do an effective job of teaching. However, when the total cost for facilities and a teacher is divided by the number of students enrolled, the cost is apparently considered to be excessive.

The solution to this problem, as suggested by administrators, is to allow more students to enroll in classes of vocational agriculture or permit teachers of vocational agriculture to teach other classes or to keep study

[1]Earl S. Webb, *Opinions of School Administrators Concerning Selected Aspects of the Program of Vocational Agriculture in Missouri*, Library, University of Missouri, Columbia, 1959.

hall without a reduction in reimbursement from vocational education funds.

Data revealed that the high cost per student was a criticism, for the most part, offered by administrators of small schools or schools in which enrollments in vocational agriculture were low.

One-third of Missouri administrators were of the opinion that departments of vocational agriculture could not be justified in their schools. Only forty percent thought their communities would be willing to support vocational agriculture as now conducted if federal funds were no longer available.

It seems safe to conclude that many immediate changes would be made if Congress failed to appropriate funds for vocational education in agriculture.

Professional Relations

Forty-five percent of the administrators believed teachers of vocational agriculture should be more cooperative with administrators and forty-eight percent thought they should be more cooperative with other members of the faculty.

The major criticism was the independent attitude that many teachers seem to have toward the total school program. A rather large number commented that teachers of vocational agriculture seem to think they are not a part of the regular school. On the other hand, it seems that teachers qualifying in recent years show much improvement in their professional attitudes.

Use of Time During School Day

Fifty percent of the administrators were of the opinion that teachers of vocational agriculture should teach one or more classes in addition to vocational agriculture. In terms of the number of comments, this seems to be the most irritating problem encountered by administrators in administering programs.

Criticisms were, for the most part, in three categories: (a) teachers should be assigned to teaching duties in the best interest of the school and community; (b) teachers are forced by policies into becoming segregated members of the faculty; and (c) the lighter teaching load for fewer periods daily causes other faculty members to resent the teacher of vocational agriculture.

Summer Program

Only forty-four percent of Missouri administrators thought the summer programs of teachers of vocational agriculture justified twelve-months employment. A majority, however, seem to believe that instruction is needed during the time schools are not in session, and that teachers who accept their responsibilities have plenty to do.

Negative comments were in three main categories: (a) teachers work for themselves rather than the school; (b) they spend little time in the community; or (c) there is little to be done since enrollments are small. Many seemed to believe that all necessary work could be accomplished in about ten months.

Summing Up

Many administrators were critical. However, there is reason to believe they have a desire to improve the program and not to destroy it. Criticisms should be considered as administrative suggestions for improving the program. As a whole, vocational agriculture in Missouri seems to be considered a valuable part of school programs; however, there are evidently policies and practices that need to be revised. The investigator received many letters commending him for studying the problem and expressing a desire that policies might be changed to allow vocational agriculture to become better integrated into the school program and to be directed more toward fulfilling educational objectives for secondary education.

Little doubt exists concerning the need for further research into the problems uncovered in this study and the remedial measures that must be taken. □

What the Administrator Expects

Of the Teacher of Vocational Agriculture

J. C. ATHERTON, Teacher Education, University of Arkansas

J. C. Atherton

ADMINISTRATORS of high schools with some of the better programs of vocational agriculture in Arkansas were asked what they expected of their teacher of vocational agriculture. A summary of their thinking is worth consideration as it seems that the characteristics they prefer would be valuable for teachers to possess regardless of the school district in which they reside. The substance of their views is:

1. The teacher of agriculture is a member of a professional faculty. As such, he assumes willingly those duties which are common to all teachers. He is an active member of the team working for the benefit of the school as a whole and, as such, is interested in those things which affect any phase of the school program.
2. He is a dedicated teacher. He is a teacher by choice and is devoted to his profession. He does not let outside interests interfere with his duties as a teacher. His primary interest is the development of individuals—youth and adults.
3. He conducts the best practical program that is possible. In doing this he considers what is best for the community and then plans accordingly. Classroom time is spent in teaching. There is a balance between the various phases of the vo-ag program. Community needs and individual needs are the basis for the instructional program. Adjustments are made when practical to care for slow learners and also to utilize best the facilities and abilities of individuals enrolled in the educational program. Excellence is demanded in classwork of the all-day boys. English and writing are not neglected when the student enters the vo-ag building. The teacher works closely with parents so that a simultaneous approach is made to pupil development. He teaches those things which have practical application in the local community. This is especially true in the participation in various contests. Local resources are utilized to the extent practical in the educational program.
4. The teacher of vocational agriculture coordinates his program with that of the entire school.

Although he has a distinct function to perform, he considers the educational program in its entirety when making basic decisions. Special events such as banquets, parties, etc. are scheduled through the administrator's office to keep conflicting dates to a minimum and to eliminate friction between staff members and between departments in the school.

5. The teacher knows his job and does it well. He is a good organizer and utilizes his time on important aspects of the program. He is an educator and is primarily concerned with education. Community service is conducted on an educational level with personal service being minimized. He requires little personal supervision from the school administrator. He has an automatic self starter—when there is work to be done he recognizes the need and proceeds to do something about it.
6. He keeps abreast with modern educational and technical practices. As part of his routine, he participates in inservice training such as seminars, workshops, short courses, field days and summer school. He is an active member of professional organizations.
7. The teacher of vocational agriculture promotes good school-community relations. He resides in the school community and participates in community functions. He is an active church member. He is acquainted with most of the people in the community. The community is kept up-to-date on the local educational program in agriculture through the means at the disposal of the instructor.
8. He keeps the administrator informed. The administrator is apprised of the entire educational program of the teacher of agriculture. This can be done best through formal and informal conferences, through reports, and by personally showing the administrator various aspects of the program. Plans of the teacher and problems relative to conducting the program should be discussed with the administrator. The teacher through his visitation and personal contacts is in a position to secure much information about the community which could be useful to the administrator and school faculty.
9. The teacher is self-disciplined. The teacher has the ability to put first things first. He is aware of the mores of the school community and abides by them. He is dependable and trustworthy. He requires a minimum of supervision, however, he accepts suggestions and utilizes them in the improvement of his program. He refrains from obnoxious behavior in all forms. He is prompt in correspondence and in submitting reports.
10. The teacher is a *regular* fellow. He mixes well with faculty, student body, and the community. He is respected as a "solid" citizen of the community. He works effectively as a part of a group.

Attention given to the type individual the administrator wants for his school system would be beneficial to the trainee preparing to teach as well as those responsible for preservice and in-service training of teachers. □

Build Evaluation into Your Program

A Responsibility

GEORGE W. SLEDGE, Teacher Education,
University of Wisconsin

George W. Sledge

EVALUATION in education is inevitable. If we don't evaluate, someone else will—others do! With rapid changes occurring in educational thought and practice, planning for evaluation is imperative to aid the improvement of educational programs in vocational agriculture.

In some way, you are having an effect on a large group of people. You are one of the more than 10,000 men who have the important responsibility of educating rural people through vocational agriculture in the United States. Over ¾ million youth and adults receive instruction annually through your program.[1] Approximately ½ million youth are *daily*—five times a week for nine months of the year—receiving scientific education in agriculture through school-community programs.

This program in which you are involved annually expends over $59,000,000 for its operation in the United States. Of this in 1956-57, a sum of $54,209,667.11 was expended for instructional purposes.[2] Instruction is being paid for! These figures reveal in part the magnitude of the instructional responsibility held by you and other teachers in this program. Does the profession have a responsibility to its clientele and to citizens in general to evaluate for continuous improvement of that instruction? If so, and this would appear apparent, evaluation should be built into your program. You are already doing evaluation on some basis either consciously or unconsciously.

[1] *Digest of Annual Reports of State Boards for Vocational Education to the Office of Education.* Division of Vocational Education, U. S. Department of Health, Education, and Welfare, Washington, D. C., 1958. p. 5.
[2] *Ibid.*, pp. 26-27.

Understanding Evaluation

Briefly stated, evaluation is a process wherein you determine how well you are doing what you are trying to do. Stated in another way, the process of evaluation provides you an opportunity to determine whether or not the accepted objectives of the program are being met. In our programs, we can evaluate either: (1) *outcomes, results, effects;* (2) *process, method, procedures and techniques;* or (3) a combination of the foregoing. Evaluation should occur, on an integrated basis, during the process of program planning and conducting *as well as after* an outcome or result has been realized.

In the evaluation of "outcomes," we would be concerned with the determination of whether or not we have desirably changed the behavior of people. Practically speaking, this

suggests that we analyze whether or not new knowledge has been acquired by students and to what degree—and whether or not needed skills, abilities, understandings, favorable attitudes, and desirable appreciations have been effectively developed. Essentially, this approach in evaluation should prompt us, and others concerned with educational outcomes, *to examine heads, hearts, and hands rather than simply count them.*

In the evaluation of "process," we would be involved with the analysis and judgment of whether or not the methods used to achieve the educational objectives are effective. How you plan and the method by which you direct learning are examples of process and procedure which would be evaluated as something distinct from the outcome of the process, recognizing that process and procedures greatly affect outcomes. Other examples of factors involved in "process" evaluation include: curriculum, teacher time and load, summer activities, public relations approach, Future Farmer Program of Work, records and reports, equipment and teaching aids and materials, classroom and laboratory facilities, supervised farming programs, our professional qualifications and improvement, enrollments in young and adult farmer programs, and financial support provided.

We have unique opportunities to evaluate individuals! We should be aware that the procedures of testing and measurement in and of themselves do not constitute evaluation. Truly, they are a part of evaluation. Sound evaluation should be based upon results of measurements, of purposeful observations, of critical appraisal and analysis—but we should be aware that in evaluation there is a judgment factor. Any instrument, device, observation, or process employed in providing evidence upon which an evaluation is to be made should have these identifiable qualities: validity, reliability, appropriateness, usability, and objectivity. In the final analysis, whether a thing measured is "good, bad, or indifferent" depends on many factors: the value placed on the measure by the evaluator(s), the criteria or standard being utilized, and similar considerations.

Before evaluation is undertaken, the objectives of the program should be clearly stated and carefully defined. Objectives provide the basic framework in which we can effectively plan, conduct, evaluate, and improve programs. Identifying objectives allows us to see more clearly how evaluation can be built into educational programs. From objectives, we can determine the kind of change of behavior being effected and determine situations in which achievement of objectives will be shown.

Recognizing Merits of Evaluation

Evaluation can aid directly in program improvement. It will help us identify strengths and weaknesses. In so doing, the strengths can be maintained—the weaknesses can be eliminated. Through evaluation, the determination of progress toward fulfillment of educational objectives can be made, and almost simultaneously accomplishments of the program can be objectively reported to our various publics. Providing others with information on outcomes and of effective progress will strengthen the position of vocational agriculture and you in your community.

Through continuous evaluation, our knowledge of people and changes occurring in them is also increased. This enhances our professional growth and understanding. It also helps provide insight for more effectively working with individuals. We learn better how to counsel individuals and how to more effectively initiate improved farming practices. A knowledge that you are successfully meeting accepted objectives provides a certain psychological security and confidence desired by all. Knowledge of success tends to motivate and challenge us to more effort for continued desired achievement.

The primary purpose for evaluation must always be to help determine how the most effective educational program can be provided for INDIVIDUALS.

As our programs are improved and as contributions of programs are made known to others, then the personal benefits of evaluation will be more easily recognized and appreciated.

Building Evaluation into Programs

Building evaluation into an educational program of agriculture embraces what we generally refer to as the program planning process. The explanation of "building evaluation into programs" is limited here in that the "so-called" practical methods have generally been implied rather than stated in detail. Relating such things as (1) keeping records and analyzing them, (2) developing monthly reports, (3) interviewing farmers, (4) consulting with advisory members, (5) developing cumulative records for your students, (6) self-evaluating program, facilities, etc., (7) observing farming programs of students, (8) viewing and reflecting on leadership abilities exhibited by Future Farmers, (9) administering classroom tests, (10) observing how well a student progresses with and completes a shop project—and on-and-on—to the concepts herein portrayed could be undertaken by you.

Planning our educational programs is extremely important. It is the process through which desirable ends are determined. Care must constantly be taken that we plan *with* people rather than *for* them. *No one person has a monopoly on valuable ideas!* How then can we plan and conduct

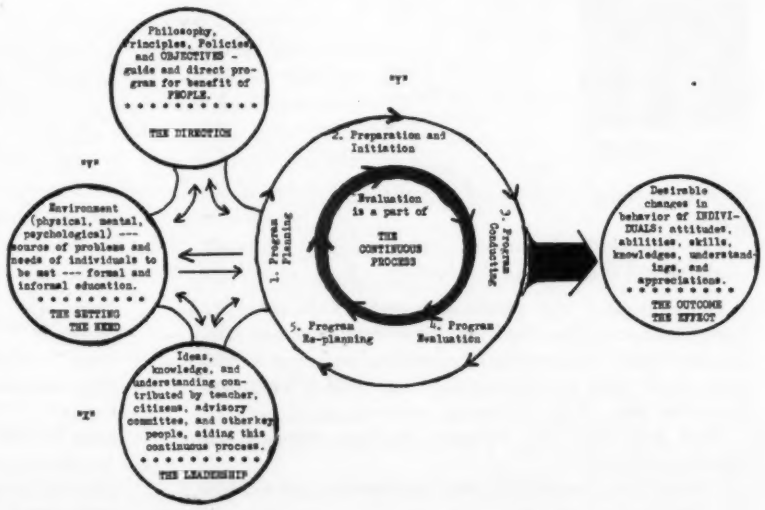

Figure 1. Evaluation Should Be Integrated Into the Total Educational Program: Its Development, Conduction, and Analysis of Outcomes.

educational programs and integrate, at the same time, the process of evaluation?

When evaluation is integrated with program planning, preparation, conducting, and replanning as illustrated in Figure 1, it can have a desirable effect on (1) the process of providing education for people and (2) on the outcomes of the education which is provided. Figure 1 reveals that evaluation can be an integral part of the total program.

"The Continuous Process," labeled "Y" in Figure 1, incorporates evaluation in numerous ways. For example, before a program can be effectively planned, an analysis of the situation ("V"–The Setting–The Need) should be made. This will mean that you and others ("X"–The Leadership) will determine the significant problems and needs of individuals in your community. When this is done, considering your beliefs and principles of operation, you with others have a responsibility to formulate and *justify* sound educational objectives. After the determination of objectives ("W" –The Direction), you, with assistance, must then analyze and decide upon how to achieve objectives. This will necessitate the formulation of policies and procedures which will contribute to successful accomplishment of objectives. To decide that certain policies and procedures are more appropriate than others means that you analyze and judge alternatives and logically arrive at the most acceptable based on certain criteria. Embraced in these functions is the program planning process (see "Y").

Preparing curriculum, promoting the program, and initiation of the program contribute to this total process. Here again, you as the educational leader in agriculture must evaluate alternative procedures for curriculum development and for program initiation. You, naturally, want to follow the procedures which will assure you of a program adapted to the people and their objectives. In conducting a program, you should be concerned with the analysis of procedures used. Whether or not supervised farming programs are effectively developed, the success of your teaching demonstrations and your ability to teach by the problem-solving procedure are examples of the kinds of things which you should be interested in evaluating–*and improving* if they should be.

After the program is evaluated (including evaluation of "Y" – The Continuous Process and "Z"–The Outcome or The Effect), it can be replanned and improved based on objective evidence and standards agreed upon within the community. Involved in effective replanning to realize more effective educational outcomes is a reappraisal of the situation. A reappraisal of the situation is necessitated by the fact that as progress is made and as people change (develop abilities, skills, etc.), the program process and content must reflect this progress and change and thus be modified to continually contribute to the education of individuals.

When you build evaluation into your program, as illustrated, it will be a vital force to help you in providing a strong educational program in agriculture. □

Class Management Evaluation

How Dull Is Your Agriculture Class?

PHILIP E. SCHMIDT, Vo-Ag Instructor,
Oconto, Wisc.

Philip E. Schmidt

WHAT do your students think of your teaching? Do they feel that your work is dull? Could you improve it?

We often measure the results of our assignments with tests. If a test was applied to your teaching, what would be your grade?

The following questionnaire when used will tell you some of the feelings of your class. If this is conducted over a period of years with each class or grade, a fairly accurate picture of your class management is produced.

The first ten questions concern your class management and its comparison to other classes that each student has. The remaining questions are general concerning other factors of interest. Of course, it is easy to add other questions of local concern. Keep papers for each class separate for tabulating purposes. After the students have completed the papers, use a blank questionnaire for tabulation. Place a short vertical line or x on the summary sheet for each answer. Draw a long vertical line through each question on the middle or average placing.

If a particular question or questions show a low rating, look for a reason and then correct it for next year.

It is important to pick an average day for this test. Do not pick a day during which students are excited over some coming event. Do not give advance suggestion that it is going to be given. A certain amount of judgment must be held in reserve concerning the result of the test. Students may mark high or low according to their individual feeling at that moment. However, if this test is used over a period of years, certain weaknesses in your class management can be corrected.

Do you rate average or above?

Please answer the following questions honestly and frankly. Your teacher will not know how you answered. Disguise your handwriting by printing or using a backhand slope. After completing this paper fold it lengthwise. *Underline* one of the following answers.

How does this class compare in these respects with others you have?

1. How clear have been the assignments and explanation given in class?
   Poor Fair Average Good Excellent
2. How well has this course been planned and organized?
   Poor Fair Average Good Excellent
3. How interesting have been the units, problems and topics?
   Poor Fair Average Good Excellent
4. To what extent has this teacher been friendly, considerate and concerned over your problems and difficulties?
   Poor Fair Average Good Excellent

5. Of what value were the topics and problems studied in class?
   None Little Some Large Very Large
6. How much have you learned in class?
   None Little Some Large Very Large
7. How does the grading system compare to other classes?
   Poor Fair Average Good Excellent
8. How would you rate the notebook system followed?
   Poor Fair Average Good Excellent
9. How would you rate the class attitude?
   Poor Fair Average Good Excellent
10. How would you rate the class interest?
    Poor Fair Average Good Excellent
11. How would you rate the films shown during the year?
    Poor Fair Average Good Excellent
12. How would you rate the other visual aids used?
    Poor Fair Average Good Excellent
13. How would you rate the value of the farming program to you?
    None Little Some Large Very Large
14. How do you rate the instructor farm call value to you?
    None Fair Some Large Very Large
15. How would you rate YOUR attitude toward this class?
    Poor Fair Average Good Excellent
16. How would you rate your parents' interest in this class?
    None Little Some Large Very Large
17. How would you rate the following relationships?
    Teacher-Student Poor Fair Average Good Excellent
    Teacher-Parent Poor Fair Average Good Excellent
    Student-Parent Poor Fair Average Good Excellent
18. Why are you taking this class? □

What Do Your Students Think of Your Teaching?

Teacher-Rating by Students*

EDWIN E. LAMBERTH, Vo-Ag Instructor, Spring Hill, Tennessee

Edwin E. Lamberth

DO you often wonder what the students in your classes think of you as a teacher? By determining what they think, we should be able to improve our teaching. A good program of teacher evaluation will include the feelings of the students toward the teacher.

Teacher evaluation is the process of appraising teaching carefully. It is a continuous and constant process. Teacher evaluation is part of the total evaluation program and must be made in terms of formulated objectives. Any sound teacher evaluation program will help the teacher to determine the effectiveness of his teaching, his strengths and weaknesses and how he may improve the effectiveness of his teaching.

In evaluating teaching, a method must be developed for procuring evidence which reveals the degree to which the instruction was effective. It must apply to specific areas which need improving and suggest ways and means for making this improvement.

Since the students are better acquainted with the teacher's procedure and are influenced more by his teaching than anyone else, they should have a major role in the evaluation. A common teacher evaluation technique is to obtain class members' opinions of the teacher's effectiveness. The rating scale on this page has been used by the writer to obtain the opinions of his students.

*The writer wishes to acknowledge the help provided him in preparing this article by Kenneth Diehl, vo-ag instructor at Shelbyville, Illinois, and John D. Smalling, graduate student at Texas A and M College.

Teacher Rating Form

Please rate ( ) the instructor of this course on the following points sincerely, fairly, and carefully. Your conclusions will in no way influence your grade. Do not sign your name. A summary will be made by a student committee. The instructor will see only the summary.

Points to be Rated	*Excellent*		*Average*		*Poor*
	5	4	3	2	1

PERSONAL ABILITIES:

1. Uses good oral English .....
2. Has the ability to direct class discussion .....
3. Uses good written English .....
4. Has initiative .....
5. Has the ability to work with others .....
6. Is willing to take time to help individual students .....
7. Adapts himself to situations .....
8. Learns easily .....
9. Accepts and profits by criticism .....
10. Possesses knowledge of subject matter .....

PERSONAL CHARACTERISTICS:

1. Good appearance .....
2. Possesses quality of leadership .....
3. Is willing to cooperate .....
4. Displays enthusiasm .....
5. Is dependable .....
6. Is courteous and refined in his personal relationships .....
7. Personality is attractive .....
8. Personal behavior is acceptable .....
9. Has shown interest in others .....
10. Possesses sense of humor .....
11. Possesses self-confidence .....
12. Has good voice .....
13. Is persistent .....
14. Is sincere in his efforts .....

TEACHING CHARACTERISTICS:

1. Prepares for teaching effort .....
2. Requires quality thinking .....

3. Encourages exploration of new ideas .....
4. Maintains interests .....
5. Is practical and useful .....
6. Is clear and logical .....
7. Is flexible .....
8. Provides for appraisal of experiences .....
9. Forms sound conclusions .....

OBSERVATIONS AND SUGGESTIONS:

1. Where would you locate the major faults in this course? (Check as many as necessary)
   ( ) Method in teaching
   ( ) Subject matter
   ( ) Teacher's personality
   ( ) Class itself
   Other: .....
2. Make a list of several of the teacher's strongest points and his weakest points:
   Strongest: .....
   .....
   .....
   .....
   .....
   Weakest: .....
   .....
   .....
   .....

Author's Conclusions

1. The teacher must believe his students possess a knowledge of the characteristics of good teaching. The students must also believe they possess this knowledge.

2. Attitude among the students is important. They must feel that here is a chance for them to help the instructor improve his teaching so that he can do a better job. Students should not form the attitude that teacher rating is a good opportunity to get even with the instructor, or that their opinions will influence their grades.

3. Students should not sign their names on the form. Have a student committee prepare the summary. After the summary is completed, this committee should destroy all individual forms. The teacher should see only the summary and he should discuss it with his students.

4. The teacher should realize that one student's comments may not be worth much, but if several students make practically the same comment it is very likely to have some significant value. The students may recognize undesirable features not perceived by the teacher.

5. Teacher rating scales should be used periodically. Students should probably be given the chance to complete scales at least once a year. By comparing periodic ratings, the teacher can determine the improvement being made.

6. Results of teacher rating can be used in selecting graduate courses and in selecting programs for in-service training programs. Effective teacher rating will point out weaknesses which can be overcome through self-study and practice.

7. Instructors should be challenged by the opportunities for progress which grow out of teacher evaluation. To be effective, students must share in this evaluation. By so doing, a person should become a better teacher. □

Marketing in a Vo-Ag Program

WALTER J. WILLS[1]

Does marketing fit into a vocational agriculture program? These questions recur and the answers are elusive but there are many ways marketing information can become part of a well rounded program.

Before much can be accomplished the student must understand the "Marketing Process" and how farm commodities move from producer to consumer. This suggests two activities: (1) tours of marketing facilities and (2) a photographic approach.

Tours of facilities. A number of different tours are possible. Some suggested tours are: livestock markets, grain elevators, processing plants, grocery stores and other types of marketing facilities. In addition, there are various facilities supplying farm production items. Credit is important to farm operators. A tour of a local credit agency is helpful.

A tour group should be kept small (under 20) so that the students can see, hear and ask questions. Such a tour should be the basis of developing information. Some suggested items are: what functions are performed, what are sources of supplies, what are uses of products, who are customers, where does product go, how are prices established, what has been trend in volume, what have been recent (last 5 years) changes in services, products, etc., what are some of the operation problems, and other items of this nature.

Photographic Approach. Some students have developed an interest in photography. Students with this interest could be encourage to tell a complete story on the marketing processes with pictures or slides taken in the area.

Marketing Costs. Two different approaches can be taken in discussing marketing costs.

1. The percent of the consumer's dollar received by the farmer for various commodities can be analyzed. This involves developing information on the cost of the various services for each commodity such as transportation, processing, retailing, etc. These figures are also available by sources of expense such as: labor, interest, depreciation and other items of this nature. The factors causing differences in amount received by commodities can also be developed such as: bulkiness, distance, perishability, amount of processing, etc.
2. The student can estimate cost of marketing a given consignment of commodity by knowing sales price and the various cost items from farm to market. There are also hidden costs such as loss in weight or quality deterioration that need to be considered. This type of information can form the basis for discussing factors to be considered in determining where to market.

Seasonal Price Movements. For most agricultural products there are seasonal price movements which need to be considered in determining when to market. For livestock production this information is useful in planning livestock breeding, feeding and management programs. The use of seasonal price information may also assist in determining under what conditions a farmer can afford to store grain.

Cyclical movements in production

[1]Chairman, Agricultural Industries Dept., School of Agriculture, Southern Illinois University, Carbondale, Illinois.

and price may be used to demonstrate some of the longer run price movements as they affect management decisions.

Credit. The amount and terms of credit may determine the nature and extent of the farming operation as well as the marketing program. Several areas of work are suggested: (1) A discussion of the loan factors: the man, financial position and progress, loan purpose, repayment capacity, and collateral. (2) A couple of loan samples, with identification removed, could form the basis for the class analyzing a loan; then have a credit agency representative discuss the loan, its strong and weak points. (3) A discussion of the various credit instruments such as note, installment note, chattel mortgage, real estate mortgage, abstract deed and conditional sales note with examples could be helpful. (4) A visit to a courthouse with the various offices explaining types of information available is another possibility. (5) Each member should finance, from funds borrowed from a credit agency, at least one project. He should fill out all the prescribed forms and understand the reasons for this. (6) In many cases it may be possible for the FFA to organize a junior credit agency working with a local bank or production credit association.

Cooperatives. The students should be familiar with farm cooperatives. Two activities are suggested: (1) Attend a board of directors meeting to become better acquainted with business management problems. (2) Form a cooperative through which the members could purchase or market on a cooperative basis.

Using Economics as a Management Tool. Marketing information can assist in making sound farm mangement decisions. Problems of the following types could be presented to the students as part of their regular assignments:

1. In March, choice light weight feeder steers are $30; choice fat steers $27; corn $1.20. You have plenty of good pasture. How would you use the pasture land? Explain.
2. Grade A milk is at $4, Class C milk at $2.75, choice veal calves at $28. If you had a 20 cow dairy herd, adequate land and labor, and were producing Class C milk, would you continue, shift to Grade A, or produce veal? Explain.
3. You are a tenant with $9,000 worth of machinery and livestock free of debt. You can rent a good 200-acre farm or buy on contract a poor 160-acre farm with $1000 down for $17,000. Which would you do? Explain.
4. You have a flock of 50 breeding ewes. When would you breed to maximize income? Explain.
5. Discuss 3 income advantages of having dairy cows freshen in the spring.
6. You have two broiler houses (capacity 4500 birds each) and other equipment to produce broilers. With corn at $1.20, soybean meal at $70, and broilers at 16½¢, would you produce broilers on contract, produce independently, or shift to some other enterprise? If so, what? Explain answer.

Developing answers for these questions would require considerable work for a student, but he would be learning how to use economic data in decision making. He will be making many decisions as an adult; this method may better prepare him to do it on a sound basis.

Another type of problem requiring the use of economic information in decision making is illustrated by the following:

Assume you have $1,000 to invest in a farm enterprise; adequate facilities are available. You can invest anytime from September 1 to December 31. How would you invest? Show estimated income and expenses for the project. You are in high school, live at home, and must provide the necessary labor. Use either current and expected future price, or use historical prices for the past five years.

Some suggested projects are:

1. Dairy calves
2. Bred dairy heifers
3. Producing dairy cows
4. Broilers
5. Turkeys
6. Egg flock
7. Feeder lambs
8. Ewes
9. Feeder cattle
10. Beef cow herd
11. Feeder pigs
12. Sows
13. Wheat
14. Corn
15. Soybeans
16. Vegetables
17. Small fruits
18. Tree fruits
19. Store grain

It is hoped the discussion has proven useful in suggesting ways tours and problems can be used to bring about a better appreciation of marketing and ways to more effectively use economic information in sound decision making. □

What Teachers of Vocational Agriculture Think They Should Do—

During Their Summer Employment

HOWARD R. BRADLEY, Teacher Education, Kansas State University

Howard R. Bradley

WHAT do Kansas teachers of vocational agriculture think they should be doing during their summer time? In what activities should they engage? How frequent should certain activities be undertaken? How many days of their summer employment should be spent in each activity?

These questions were left unanswered until the fall of 1959 when approximately one-hundred experienced Kansas teachers of vocational agriculture expressed their opinions on a questionnaire concerning summer programs.

The answers to these questions could serve both the experienced and the beginning teacher in that the experienced teacher could use it as a re-examination and evaluation of his existing summer program. The beginner could use it for a guide in building his summer program.

Kansas teachers indicated that they believed nearly one-third of their summer should be spent in planning for the coming school year. Supervision of farming programs and pro-

fessional improvement tied for second place. Future farmer activities ranked third followed closely by community service and out-of-school programs. Records, reports and publicity activities required the least amount of time according to the opinions of the teachers.

The teachers thought that out of 50 allotted days that 15.3 days should be spent planning for the school year, 8.99 days for professional improvement, 8.7 days for supervision of the student's farming programs, 5.15 days for Future Farmers of America, 4.25 days for school and community service, 3.92 days for out-of-school programs, 2.56 days for publicity and 1.3 days for records and reports. (figure 1.)

It was interesting to observe that Kansas teachers thought that only 8.7 days for the day-school and 3.92 for out-of-school program of the 50 allotted days be allowed for the supervision of day- and out-of-school programs. If one considers that the teachers were not asked to report on their own day- and out-of-school summer program, but what they thought should be the time spent on the day- and out-of-school program during the summer, one cannot but observe the small amount of emphasis in this area. The supervision of the day-school and young and adult programs has been to date one of the major reasons for vocational agriculture teachers being on the job for eleven months of the school year.

An interesting observation can be obtained by noting the frequency of engagement that Kansas teachers thought should occur in the area of supervising the student's farming programs and out-of-school programs. (figure 2.) Ninety-two and five-tenths per cent of the teachers thought the supervising of student farming programs should be carried out every summer, while 37.5 per cent thought that the supervising of young farmers on the farm should be carried out every summer, and only 20.5 per cent thought that the supervising of adult farmers should be carried out every summer.

Noting the suggested infrequent visitation of out-of-school programs by the teachers, is there a tendency for the summer program to be vulnerable to criticism by school administrators, boards of education, and the lay public in regard to eleven month employment?

Some ways to improve the summer program as well as to avoid possible criticism might be as follows:

1. Decrease the number of days for planning for the school year from 15.13 to 10.0 days.
2. Increase the number of days for supervised farming programs from 8.7 to 12.0 days.
3. Increase the number of days for out-of-school programs from 3.92 to 8.0 days.
4. Increase from never or seldom to always or usually the frequency of engagement in out-of-school programs.

A suggested summer program of activities for Kansas vocational agricultural teachers would be as follows: planning for the school year, 10.0 days; professional improvement, 7.0 days; supervising farming programs, 12.0 days; Future Farmers of America, 4.0 days; community service, 5.0 days; out-of-school programs, 8.0 days; publicity, 3.0 days; and record and reports, 1.0 day. Because many teachers indicated that they thought 50 days was not enough time to carry on the vocational agriculture summer program of activities, a plan based on per cent of time could be more useful. Percentage wise, the suggested summer time program would be as follows: planning for school year, 20.0 per cent; professional improvement, 14.0 per cent; supervising farming program, 24.0 per cent; Future Farmers of America activities, 8.0 per cent; community service, 10.0 per cent; and out-of-school program, 16.0 per cent. Under this plan,

FIGURE 1. AVERAGE AMOUNT OF DAYS RECOMMENDED BY KANSAS VOCATIONAL TEACHERS FOR SUMMER PROGRAMS

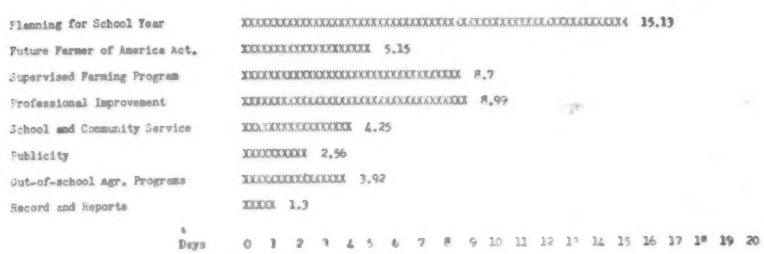

FIGURE 2. A TABULATION OF TEACHER OPINION CONCERNING FREQUENCY OF ENGAGEMENT IN SELECTED SUMMER ACTIVITIES

40.0 per cent of the teachers' time would be used for supervising farming programs and out-of-school programs. More time devoted to these two vital areas, supervising farming programs and out-of-school programs, will strengthen the effort to accomplish the original objectives of vocational education in agriculture. □

Looking Ahead In Agricultural Education

Luther Hardin, NVATA Past-President and Vo-Ag Instructor, Searcy, Ark.

Luther Hardin

WE, the NVATA, welcome the opportunity of sharing our thinking with our coworkers in agriculture education. The future of vocational agriculture depends on all three groups—our supervisors, teacher trainers and our teachers in our high schools over the United States.

Our NVATA, which will have over 10,000 members this year, is ready to assume its share of responsibility in carrying out an improved agricultural education in the future. We believe that each teacher should belong to our organization and actively participate in promoting our profession. Our supervisors and teacher trainers have played a vital role in telling our teachers to become professionally minded. Our NVATA is grateful for this cooperation. I firmly believe that our profession is second only to the ministry.

The question "Where do we go from here in Agricultural Education?" should be in the minds of every person present. Agricultural education has meant different things to different people. There are those who insist that all education is vocational. They agree that being able to read, write, and do simple calculations in arithmetic is necessary in most present day employment; therefore, reading, writing and arithmetic are vocational education subjects. The importance and necessity of these abilities cannot be denied. Agricultural educators would be the last to deny their importance to workers. In the sense that education is preparation for and adjustment to life, and work is a major factor in everyone's life, all education can be thought of as vocational preparation in a very broad, general sense. Perhaps it might improve education greatly if it were looked upon realistically as preparation for and adjustment to working or a means of livelihood.

There are also those who believe that agricultural education is confined to training of the hands only. They visualize agricultural education simply as practicing certain routine physical manipulations. Of course, development of manipulative skills is important. It is a basic part of most any vocational course. The development of the routine skills of an occupation is not, however, a true or complete concept of agricultural education. Many educators have this erroneous conception of agricultural education and it is your job to correct their thinking. There is an indication that the lay public is tremendously interested in a youth program which trains for useful citizenship and leadership. Agricultural education is certainly meeting these needs. Vocational education has come to be accepted as that phase of education designed to improve the proficiency of an individual for and/or in a specific occupation. It is either preparatory for specific employment or supplementary to the work of those employed in a specific occupation. It is not restricted to boys in secondary schools but is provided for adults who need and can profit from vocational agriculture instruction.

Some school administrators and other lay people that do not possess a favorable outlook toward our total agricultural education program, do not understand our program or the teacher is failing to carry out the program. The late Senator Walter George told me in his home in Vienna, Georgia, in July, 1957, "Luther, those that oppose your program don't know your program." A true statement from a person that knew our program and supported it. An improvement of our public relations program in agricultural education is imperative. A few years from now may be too late.

There have been those that want to measure the total effectiveness of our program by the number of our high school boys who actually continue farming. To me this is not fair. Most of our students are faced with time in the military service. The measure of effectiveness is the extent to which agricultural knowledge and skill is utilizable wherever it is put to use. In any normal distribution of agricultural knowledge, skill, interest, and achievement, it cannot be expected that all will enter a specified segment (farming)of the agricultural industry. To do so would ignore the selecting and sorting function of the school and nurture an educational function that occupies a narrow range of interest within the broader range of agricultural knowledge, skill, achievement, and opportunity. Too much emphasis or evaluation has been placed on the numbers in our agricultural education program. Too many times we talk about the number of boys enrolled in all-day classes; the number of young and adult farmers enrolled in our courses. We forget to stress the accomplishments of our people who have adopted improved methods and achieved greater proficiency. The fewer people needed on farms today to produce more than ever before is definite proof that someone has been doing his job well. As our program unfolds in the future, we shall find that we can work more intensively with fewer and fewer people and thereby serve them better.

The statement has been made that all boys interested in studying agriculture are interested in becoming farm operators. This is obviously not true and it never has been true. There are many students in high school agriculture that are in search of information that will assist them in future occupational training and decision making.

Another statement that you may hear floating around in educational circles is, "There is a decreasing need for including agriculture as a high school subject." This is caused by misinformed people and it is our duty to inform such persons, in order that the statement may be corrected. Agriculture is one of the primary areas of scientific research and discovery. Its contributions to other disciplines and to the public welfare are sufficient in themselves to provide teaching content of compelling importance.

We have a big job to do in young farmer and adult farmer education. It has been estimated that 40% of the American labor force is either engaged in farming or else in agriculturally related industry. Presumably, agricultural knowledge and skill are important to their occupations and to their occupational advancement. If this is true, there is an agricultural education responsibility to this group whether on the elementary, secondary, or higher education level.

Another place our agricultural education training program is needed is for those young people making a career of agriculture. Earlier this year under secretary of Agriculture True D. Morse said that under farming's technological development 15,000 new jobs for college graduates are created in agriculture each year. But the nation's land-grant agricultural colleges are providing only 8,500 to fill these openings.

"There are more than 500 distinct occupations in the eight major fields of agriculture," Morse said. "These fields are research, agriculture industry, agricultural business, education, communications, conservation, agricultural services, as well as farming and ranching."

It is my belief that agricultural education will make great strides forward if we will stay with our present Smith-Hughes Act and possibly alter our interpretation to a broader concept to keep pace with our changing agriculture of today. The act was set up to meet the needs of rural communities of America and I pray that we will never forget this primary purpose.

The strength of our program lies at the local level. Here a vo-ag teacher, a product of our teacher trainers, under the guidance of our supervisors, succeeds or fails with a program. A vo-ag teacher may not think that it matters whether he formulates and carries out an effective program of agricultural education. It most assuredly does. A chain is only as strong as its weakest link.

Every person in agricultural education should be dedicated to our profession or he should seek other employment as he cannot help strengthen our program. We have no problems that cannot be solved by united action by all divisions of agricultural education. I believe in the future of agricultural education and I know we can play a vital role in the future of American agriculture. □

The large Vocational Agriculture classroom in all Vocational Agriculture Schools in Iraq can also be used as a laboratory, as shown in the above picture where the students are practicing the propagation of plants.

A view of the front of the standard Vocational Agriculture building in Iraq showing the entrances of the classrooms, the teachers offices on the left and the latrine on the right.

Vocational Agricultural Education in Iraq

An appraisal

J. H. LINTNER, Expert in Agricultural Education

During the three years I have been privileged to be in Iraq, I have seen the development of agricultural education from an abstract idea on the part of educators and a hope in the minds of rural youth to the beginnings of an actual operating program with a great potential for the future betterment of all of the people of Iraq.

I have been asked to present my appraisal of the present situation with respect to the Vocational Agriculture Schools in Iraq and indicate the major problems which need immediate attention. However, before proceeding further it seems wise to make clear that while "agricultural education" is a broad general term that can be applied to any method of guiding or improving the farmer and his work, the "vocational agriculture" program has a very definite meaning reasonably well understood in all countries of the world. To make for easy understanding, I have divided this presentation into sections as follows:

I. The Meaning and Purpose of Vocational Agricultural Education.
II. How the Program Got Started and its Ultimate Goal in the Republic of Iraq.
III. The Present Situation in Vocational Agriculture Schools.
IV. Critical Problems that Must Be Solved on Both an Immediate and Long Term Basis.

I. The Meaning and Purpose of Vocational Agricultural Education

The sole objective of vocational agricultural education is to provide training and experience in secondary schools which will enable rural youth to successfully earn a living for themselves and their families after completing their schooling by operating family-size farms or working in occupations closely related to farming. It is an in-school program of less than college grade characterized by the

following aspects:

1. Students must come from the villages and be the sons of farmers or people who earn their living from agriculture.
2. The ultimate success of vocational agricultural schools depends on whether the students desire to farm and are capable of earning a living thereby for themselves and their families when they leave school.
3. There is no promise of governmental jobs, and those who wish to be so employed should not be selected for vocational agricultural schools.
4. Enrollment must be on the basis of the boy's interest in practical farming and when this no longer exists he should not be continued in this type of school.
5. The teacher at all times must have in mind the development of vocational competence among his students rather than the memorization of facts concerning agriculture without any ability to apply them to "true-to-life" situations.
6. The length of the course is six years after the completion of primary school divided into three years preparatory and three years secondary.
7. Each school has a school farm complete with machinery and tools which are operated by the students under the direction of the teachers.
8. There is no separation between theory and practice either in the classroom, the farm shop or on the school farm.
9. Students do all the work of operating the school farm on the basis of individual and group projects.
10. Instruction is based on solving the problems growing out of the day-to-day operations on a school or home farm in a seasonal sequence.
11. The quality of the student's work is reflected in his grades and in the amount of net profit from his project work rather than his ability to memorize facts from a textbook.
12. Students should be qualified upon satisfactory completion of their vocational agriculture work to operate family-size farms made available under the Agrarian Reform Law, unless they have other opportunities to farm on family owned lands or prefer to work in occupations closely related to farming.
13. While it is not contemplated that all of the vocational agricultural students go on to college, it is hoped that about 10% will be able to qualify in order to become the future teachers of agricultural education.
14. The vocational agricultural teacher has the duty and responsibility to select a teaching method which seems best for the specific problem at hand. Ordinarily the lecture method will be used only when giving instructions with the class discussion, demonstration and laboratory methods or a combination of more than one given preference in the actual teaching.
15. The teacher of vocational agriculture will arrange the annual program of instruction within the limits prescribed by the Ministry of Education for each year, using as a guide the seasonal sequence of problems which confront the students in the operation of the school farm or their parents in the operation of the home farms. These problems will obviously pertain to an activity such as planning, ordering, operating, record keeping or marketing, with decision making the final step in each.
16. Although the development and conduct of the students' projects on the school farm will be featured each year, and multiplicity of types of projects involving both production and management of crops and livestock will require that an emphasis be given to separate subject matter areas in each of the six years of the curriculum; this does not mean that each year will be mutually exclusive. Rather the teacher will focus major attention on a given subject in a single year with varying degrees of consideration in other years according to the needs of the students.
17. Teachers are expected to make such adjustments as necessary in the general course of study prescribed by the Ministry of Education to fit the specific location of the school, having in mind the difference in climate, topography, and types of farming.

II. How the Program Got Started, and Its Ultimate Goal

Rather than wait for the completion of buildings, the pre-service training of teachers and other requirements of a complete program which would have postponed the starting of the program for several years, the vocational agricultural schools were started using rented buildings, undeveloped school farms, and inexperienced teachers.

The first school was opened in Baquoba in October 1956 with two teachers of vocational agriculture and 40 students, using facilities borrowed from the Primary Teachers Training College. Schools were started later in the same year at Mosul and Ramadi with uncompleted and rented buildings. In spite of the delay in the building program, six additional schools were opened in 1957 with very unsatisfactory facilities for students and teachers. The enrollment was increased at the rate of 20-40 students each year as teachers and facilities became available and will continue until the capacity is reached. The schools scheduled for opening in 1958 were not started since the buildings were not available and teachers could not be secured. Each school will be started with two vocational agricultural teachers and 40 students to permit orderly development of the school farming operations. It is contemplated that eventually there will be one 200 student boarding school in each of the 14 Liwas.

Arrangements were made for the College of Agriculture to train the teachers with undergraduate courses in Educational Psychology, General Methods of Teaching and the Special Methods of Teaching Vocational Agriculture.

With the development of good roads over the next 10 years, it should be possible to establish vocational agriculture departments in academic secondary schools rather than build more than one boarding school in each Liwa so that eventually every boy in Iraq who wants to make farming his life's work will be able to receive the proper training. Although initially the 200 student boarding school is the best possible solution to the im-

mediate needs for all of the students, there are a number of definite advantages to vocational agriculture departments in secondary schools having one to two teachers of vocational agriculture and 40 to 80 students.

There is no need for concern that there will be more students trained for farming than will be needed in the foreseeable future. The Republic of Iraq is in the enviable position of having sufficient land, which can be made arable by the development of water holding irrigation and drainage plans already underway, to support an improved standard of living for an increasing population. With the depletion of oil as a natural resource agriculture will assume the premier position as a source of national income.

It is imperative that the human resources of Iraq be developed simultaneously with the physical resources so that trained farmers will be ready to successfully operate the land when irrigation and drainage is made available.

III. The Present Situation

The location of schools in operation, the present enrollment and the number of teachers of vocational agriculture is indicated in the following table.

	No. of Students				*No. of Teachers of Voc. Agr.*		
Name of School	*1*	*2*	*3*	*Total*	*Iraqi*	*Non-Iraqi*	*Total*
Mosul	50	35	30	115	4	1	5
Baquoba (Khallis)	75	41	36	152	6	–	6
Ramadi	47	37	18	102	2	3	5
Sulaimaniyah	39	40	–	79	3	–	3
Hawija	34	40	–	74	2	–	2
Diwaniyah	39	125	–	164	3	–	3
Azziziyah	39	46	–	85	1	3	4
Major-Al-Kabir	38	40	–	78	2	2	4
Shatra	36	75	–	111	2	2	4
Total	397	497	84	960	25	11	36

Schools will be started in the remaining five Liwas of Iraq in the following order: Hillah, Erbil, Baghdad, Basrah and Kerbela.

When all of the nine schools presently in operation are completed, there will be 1800 students in training with 45 teachers of vocational agriculture. At the time that there is one boarding school in operation in each Liwa there will be 2800 students studying under 70 vocational agriculture teachers.

The school at Mosul was started as a part of the Cultural Center and for that reason the buildings follow the pattern determined by the Public Works Department. They provide for essentially the same facilities in vocational agriculture as planned for the other schools but, except for the farm shop building, differ in location and design.

The buildings for the eight schools presently operating in Iraq and the five boarding schools yet to be started all follow the same plan designed to provide the greatest flexibility at the least cost for maximum functional use. The site plan for all the schools is identical, except for slight modifications to conform to local topography, road net, etc.

Each school was started with a minimum of buildings, to take care of 40 students, which could be expanded by the construction of additional buildings to take care of annual increases of similar numbers until the capacity per school was reached. To accomplish this the workshop building, the small barn, the multi-purpose dormitory building and one set of three teachers' houses were built in the first year for each school. Additional multi-purpose buildings and teachers' houses are to be built in each succeeding year until the entire scheme is completed to provide for 200 students and 12 teachers.

A complete set of permanent buildings will consist of:

1. A vocational agriculture building for farm shopwork, vocational agriculture classes, farm machinery storage and vocational agriculture teachers' office.
2. A small barn or livestock building for dairy, feed storage and maternity stall.
3. A classroom building with the school offices and classrooms.
4. A dining hall with kitchen and student club facilities.
5. Three dormitory buildings arranged to form a quadrangle with the dining hall.
6. Houses for 12 teachers, including the headmaster, with sizes appropriate for bachelors and married men with families.

IV. Critical Problems with Recommendations

To be successful, vocational agriculture schools must have four components:

1. *Teachers* with a desire to train farm boys to be practical farmers and a willingness to continue in the same school long enough to make it a success.
2. *Facilities* so that students and teachers are reasonably comfortable and can develop their abilities to "learn to farm by farming" on the school farm.
3. *Students* who intend to earn their living by actually farming after they complete school.
4. *Administrative machinery* which can simultaneously guide and support a new program which has different requirements than existing programs.

The major problems are found in the areas of teacher supply, facilities and administration. There is no problem in securing students and the applications exceed the capacity by as much as 500%.

Action to solve all of the problems is needed almost simultaneously. However, the order of presentation is to some degree in the order of relative importance.

Problems Pertaining to Teachers

1. How to provide incentives for Iraqi College of Agriculture graduates to become teachers and make the teaching of vocational agriculture a career.
2. How to coordinate the needs of the Ministry of Defense with the needs of the Ministry of Education for College of Agriculture graduates.
3. How to insure that sufficient students in the College of Agriculture will prepare themselves to become teachers by enrolling in teacher training courses.
4. How to provide adequate preservice training of vocational agriculture teachers in the College of Agriculture.
5. How to provide necessary in-service training of vocational agriculture teachers to insure the proper development of a new program under very substandard conditions.

Problems Pertaining to Facilities

1. How to speed up the tendering process and have buildings completed at the time they are needed.
2. How to provide suitable school

farms with adequate size, levelness, irrigation and drainage.
3. How to purchase, store and distribute equipment, tools, livestock and supplies to have them available at the time they are needed in the schools.
4. How to insure that tools, equipment, etc., are properly installed and used in vocational agriculture schools.

Problems Pertaining to Administration

1. How to provide the leadership necessary in the Ministry of Education to insure success of an entirely new program.
2. How to promote understanding between headmasters, teachers and area directors of education.
3. How to operate within the old government regulations and procedures, or change them so that needs of teachers in the vocational agriculture schools can be met without delay.
4. How to develop a curriculum of vocational agriculture which will accomplish its objectives.
5. How to operate the school farm on the basis of individual student projects with appropriate planning, performance, record keeping, etc.

Problems Pertaining to Students

1. How to select students who will profit from vocational agriculture training upon completing school.
2. How to guide the students into their future work opportunities while they are in school.
3. How to insure that students will be able to farm successfully upon completing their schooling.
4. How to promote "growing into farming" with parents, relatives or others.
5. How to provide opportunities for vocational agriculture students to participate in agricultural expeditions, fairs, etc.

Agricultural Education Other Than On the Secondary Level

Little attempt has been made in this appraisal to consider the need and opportunities for agricultural education on the primary school level. It is recognized that a number of rural youths do not graduate from primary school and for this reason are ineligible for vocational agriculture education. It is believed that a separate conference involving representatives of the Primary Teachers Training Colleges and others from the Area Directors' of Education office in Liwas should be held at a reasonably early date to consider the problems and determine the next steps for the implementation of an "agricultural bias" in all of the primary schools of the rural areas and the possible development of pre-vocational courses in the fifth and sixth grades when there is a need.

Concluding Statement

It is realized that this paper brings up a number of problems which cannot be entirely solved in a matter of weeks or months. However, I am confident that the needs for vocational agriculture in Iraq will be recognized and that the ways and means will be formed so that this vital program will develop to the best interest of all of the people of Iraq. There is no reason why ultimately the Vocational Agriculture Education Program in Iraq will be second to none among the great agricultural countries of the world. □

A Look into the Young Farmer Program

ROSS JAMES, Vo-Ag Instructor, Elgin, Iowa

Ross James

YOUNG farmer programs are increasing in numbers and more emphasis is being placed on this phase of the vocational agriculture program. The participation of young farmers in organized programs has been reported as irregular and of great concern to instructors. This implies the need of an evaluation of the factors contributing to participation in the program. Using a survey of 212 Iowa young farmers, factors contributing to participation in young farmer programs were studied.

Participation by Attendance

When grouped according to prior training, the young farmers with vocational agriculture training attended significantly more meetings than did the young farmers without vocational agriculture. Grouped by marital status, it was found that single young farmers had attended significantly more meetings than had married young farmers.

In grouping the sample by age, it was found that 53 of the single young men of the sample who had had vocational agriculture were between the ages of 18 and 20 years of age. This group represented 25 per cent of the sample and accounted for 32 per cent of the attendance.

Table 1. Mean values and rank of 14 instructional methods by high and low attendance.

Method	Composite 212 cases		Program attendance level			
			High level		Low level	
	Score	Rank	Score	Rank	Score	Rank
Group discussion	2.64	1	2.68	1	2.58	1
Instructor demonstrations	2.42	2	2.47	2	2.37	4
Films and slides	2.41	3	2.38	3	2.50	2
Lecture	2.32	4	2.29	5	2.31	5
Shopwork	2.319	4	2.18	7	2.41	3
Speakers	2.28	6	2.35	4	2.17	7
On-farm instruction	2.19	7	2.24	6	2.14	8
Field trips outside the community	2.12	8	2.17	8	2.14	8
Field trips to farms	2.07	9	2.05	9	2.18	6
Field trips to local business and industry	2.00	10	2.05	9	1.97	11
Panels	1.99	11	2.00	12	2.00	10
Class member demonstration	1.91	12	2.03	11	1.91	12
Laboratory work	1.67	13	1.65	14	1.76	14
Cooperative group projects	1.66	14	1.76	13	1.81	13

Twenty-four per cent of the sample attended five or fewer of the scheduled meetings. Twenty-eight per cent participated in from six to eleven of the meetings, whereas 48 per cent participated in more than one-half of the regularly scheduled programs (20 meetings per year are required for reimbursement in Iowa schools).

Young farmers with vocational agriculture training were established at all levels of farming considered. Young farmers who had had vocational agriculture training had become established in the higher levels of farming at a younger age than had young farmers who had not had vocational agriculture.

Evaluating Instructional Methods

Fourteen instructional methods were evaluated by young farmers in the study. Using a four-way classification of young farmers in the sample by marital status and previous training, it was found that there were no statistically significant differences in the ratings of any of the methods within the distribution.

A comparison of the high- and low-attendance groups was made on the basis of the mean scores for the fourteen instructional methods. It was found that group discussion was rated highest by all groups. Instructor demonstrations, films and slides, lecture, and shopwork were ranked next in value by the entire sample. On-farm instruction and field trips were rated much lower in value than most instructors would rate them. Laboratory work and cooperative group projects were rated low by all groups. Other rankings deviated among groups.

Meeting the Interests of Young Farmers

Generally, married young farmers indicated that their interests were met at higher levels by the young farmer program than indicated by single men. The extent to which the young farmer programs were meeting the interests of participants in getting established in other occupations was extremely low compared to the values assessed in meeting the interests in the four other areas considered.

To further study the responses of the young farmers as to the young farmer programs meeting their interests, the sample was divided into three groups by farming-status level. In comparing the mean scores for the level at which the interest was met, it was found that the medium level farming-status group tended to parallel the scores of the composite group. For meeting the management and improvement interests, the high status group rated the program above the composite and medium group, whereas the low group rated the program below.

In meeting the adjustments interests, the low status group rated the young farmer program higher than did the medium and composite groups, whereas the high group rated the value of meeting these interests lower than did the composite group and the medium farming status group.

Organization

Considering the problem of the most desirable time of day for holding young farmer class meetings, 173 young farmers indicated that "many" evening meetings should be held, whereas 52 per cent of the individuals checked "none" for all day meetings. Afternoon meetings were not desired by 31 per cent of the individuals participating in the study.

There appeared to be no significant difference in responses by groups concerning the amount of recreation to include in the program. Likewise, little difference was observed in the average attendance of young farmers in programs having inexperienced instructors and in programs directed by instructors having had experience with young farmer classes.

The findings indicated that the level of attendance in young farmer programs was more closely related to other factors than to the experience of the instructor directing such programs. □

Research Study Reveals . . .

Occupations Entered by Agricultural Education Graduates

. . . And Why Some Discontinued Teaching Vocational Agriculture

B. C. BASS,
Teacher Education, Virginia Polytechnic Institute

B. C. Bass

IT HAS BEEN known for many years that all agricultural education graduates do not become teachers of vocational agriculture. Even some who become such teachers later leave for other work. While these conditions have sometimes prevented the filling of vacancies for vocational agriculture teachers, it has not been entirely harmful to the over-all pro-

TABLE I. OCCUPATIONS ENTERED BY 256 OF THE 296 BACHELOR'S DEGREE GRADUATES IN AGRICULTURAL EDUCATION FROM VIRGINIA POLYTECHNIC INSTITUTE 1948-1958

Occupations	Number		Per Cent
A. Vocational Education in Agriculture		144	61.0
1. Vocational Agriculture Teacher	144		
B. Other Professional Agricultural Occupations		26	11.0
1. Assistant County Agricultural Agent	12		
2. Department of Agriculture Employee	5		
3. Soil Conservationist	3		
4. Farm Service Agent	2		
5. Experiment Station Employee	2		
6. Dairy Fieldman	1		
7. Plant Identification Specialist	1		
C. Other Agricultural Occupations		19	8.1
1. Agricultural Cooperative Employee	5		

gram of vocational education in agriculture. Firstly, it is a compliment to teacher-educators for agricultural education graduates to be desired in other fields. Secondly, it is helpful to have workers in other fields who have been trained in agricultural education and thoroughly understand the goals and objectives of this program.

A study made by Lawrence C. Heiskell* throws much light upon occupations entered by agricultural education graduates. He also studied the reasons some such graduates changed occupations after being employed. While space will not permit presenting here all of the information he collected, some of the most significant findings are the basis for this article.

Heiskell asked only those individuals to participate in his study who received either a baccalaureate or a master's degree in agricultural education from Virginia Polytechnic Institute during the eleven-year period 1948 through 1958. Of the 333 living individuals in 1959 who qualified to participate in this study, 272 (81.7 per cent) supplied information.

It was found that the 236 Bachelor's degree graduates entered 24 different occupations immediately after graduation (Table I), but in 1958 they were employed in 50 different occupations (Table II).

It may also be seen in Table I that 61 per cent of the 236 individuals who received the Bachelor's degree in agricultural education from Virginia Polytechnic Institute from 1948 through 1958 began teaching vocational agriculture immediately after graduation. Of the 92 who entered other occupations upon graduation, 19 (20.6 per cent) reported teaching vocational agriculture at a later time. However, the data summarized in Table II reveals that only 84 (35.6 per cent) of the same 236 individuals were teaching vocational agriculture in 1958. This may indicate that some of the graduates used the job of teacher of vocational agriculture as a stepping-stone to other work. It may also indicate that some employers prefer to employ college graduates only after such graduates have proven themselves on a job and gained some experience.

The reasons given by 102 agri-

2. Agricultural Salesman	4		
3. Farmer	3		
4. Farm Manager	2		
5. Milk Company Trainee	2		
6. Nurseryman	1		
7. Tobacco Foreman	1		
8. Agricultural Sales	1		
D. Educational Occupations—Non-Vocational		10	4.2
1. Graduate Student	4		
2. High School Teacher	3		
3. Student	2		
4. High School Principal	1		
E. Miscellaneous Occupations		37	15.7
1. Military Service	34		
2. Mail Carrier	1		
3. Service Station Operator	1		
4. Products Inspector	1		
Totals		236	100.0

TABLE II. OCCUPATIONS IN 1958 OF 236 OF THE 296 BACHELOR'S DEGREE GRADUATES IN AGRICULTURAL EDUCATION FROM VIRGINIA POLYTECHNIC INSTITUTE 1948-1958

Occupations	Number	Per Cent
A. Vocational Education in Agriculture	84	35.6
1. Vocational Agriculture Teacher	82	
2. Assistant State Vocational Agriculture Supervisor	1	
3. District Vocational Agriculture Supervisor	1	
B. Other Professional Agricultural Occupations	44	18.6
1. Assistant County Agricultural Agent	14	
2. Department of Agriculture Employee	8	
3. County Agricultural Agent	5	
4. Farmers Home Administrative Supervisor	4	
5. Experiment Station Employee	3	
6. College Teacher	2	
7. Soil Conservationist	2	
8. Dairy Fieldman	2	
9. Bank Agricultural Representative	1	
10. Breed Association Fieldman	1	
11. Farm Service Agent	1	
12. Plant Identification Specialist	1	
C. Other Agricultural Occupations	39	16.5
1. Farmer	11	
2. Agricultural Cooperative Employee	8	
3. Agricultural Salesman	7	
4. Power Company Agricultural Representative	3	
5. Agricultural Store Manager	2	
6. Dairy Plant Supervisor	2	
7. Farm Manager	2	
8. Agricultural Sales Manager	1	
9. Dairy Plant Foreman	1	
10. Nurseryman	1	
11. Tobacco Foreman	1	
D. Educational Occupations—Non-Vocational	23	9.8
1. High School Teacher	6	
2. High School Principal	4	
3. Elementary School Principal	4	
4. Graduate Student	4	
5. Assistant High School Principal	2	
6. Assistant College Coach	1	
7. Industrial Arts Teacher	1	
8. Pupil Transportation Supervisor	1	
E. Miscellaneous Occupations	46	19.5
1. Military Service	26	
2. Insurance Agent	5	

*Heiskell, Lawrence C.—Occupations Entered by Agricultural Education Graduates of Virginia Polytechnic Institute 1948-1958. Thesis, M.S., 1959. 147 p., Virginia Polytechnic Institute, Blacksburg, Virginia.

cultural education graduates (each gave as many as he desired) for changing from teaching vocational agriculture to other occupations were:

3. Minister	2	
4. Assistant Book Editor	1	
5. Insurance Sales Manager	1	
6. Insurance Adjustor	1	
7. Joint D.O.-D.E. Coordinator	1	
8. Telephone Operations Manager	1	
9. Drug Salesman	1	
10. Store Manager	1	
11. Sanitarian	1	
12. Industrial Therapy Supervisor	1	
13. Hardware Salesman	1	
14. Rubber Plant Employee	1	
15. Mail Carrier	1	
16. Lumber Sales Manager	1	
Totals	236	100.0

Another of Heiskell's findings was that the average of beginning annual salaries of the graduates who entered the all-other-occupations group was greater than the average of annual salaries of those who began teaching vocational agriculture in every year from 1948 through 1958. The 144 Bachelor's degree graduates, whose first employment was teaching vocational agriculture, reported beginning annual salaries averaging $3,076. In 1958, the 82 such graduates who were teaching vocational agriculture reported annual salaries averaging $4,643. The increase ($1,567) in the average of salaries of the participating teachers during the period 1948 through 1958 indicates that significant progress was made by administrators during this period in improving the salaries of teachers of vocational agriculture. However, during the same period, inflation reduced the purchasing power of the dollar to an alarming extent, and the major problem connected with attracting and retaining well-qualified teachers of vocational agriculture in Virginia remains centered around salary improvement. □

Reasons	*Responses*	
	Number	*Per Cent*
(1) To obtain better opportunity to advance	54	52.9
(2) To obtain higher salary	48	47.0
(3) Other work more interesting	32	31.4
(4) Desired work nearer home	16	15.7
(5) To obtain higher retirement income	13	12.7

(Eight other reasons, each listed by from one to eight individuals, were not considered significant.)

BOOK REVIEWS

USING ELECTRICITY ON THE FARM, by J. Roland Hamilton. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1959. 397 pages. Illustrated. Price $5.00.

This is a book which will prove very valuable to vocational agriculture teachers, extension agents, other agriculture leaders, farmers, and especially to high school students who have an interest in electricity.

USING ELECTRICITY ON THE FARM is a simplified reference book containing many practical ideas for using electricity to improve the farm and farm home. The book contains instructions on how to plan and do each major job. It has many illustrations and examples that make for very easy reading and are great aids to understanding.

The text of the book is divided into six problem units:

I. How to Use Electricity to Improve the Farm
II. How to Apply the Common Laws of Electricity
III. How to Plan and Do Farmstead Wiring
IV. How to Select and Care for Electric Motors
V. Farmstead Lighting and Water Systems
VI. How to Select and Care for Other Electric Farming Equipment

Practical projects, questions, and "Additional Readings" are given at the end of each chapter.

USING ELECTRICITY ON THE FARM is a reference which should be available in vocational agriculture departments for use by in-school students and also by young and adult farmers. The vocational agriculture teacher will find it helpful in working with and advising farmers on their electrical needs on the farm.

The simplicity with which it is written, the illustrations and examples, certainly add to the usefulness of the book.

The author, J. Roland Hamilton, is a Professor and Head of the Department of Agricultural Education, East Texas State College, and an Associate Member American Society of Agricultural Engineers.

J. R. CLARY,
Graduate Assistant,
N. C. State College

SOIL CONSERVATION by Helmut Kohnke and Anson R. Bertrand. Published by McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N. Y. 298 p.; 135 illustrations. 1959. Price, $6.75.

This book was written primarily as a college text; however, it should be a helpful reference for the teacher of vocational agriculture and anyone else interested in soil conservation. It is easy to comprehend as it is written in non-technical language and is well illustrated with soils maps, charts, tables, and pictures.

The information included is logically presented in nine chapters. A clear picture is given of the aim and basic principles of soil conservation and the need for a sound philosophy of soil conservation as a means of enhancing human welfare.

Attention is also given to special soil-conservation problems and the important work done by certain soil conservation organizations. Other areas presented are the fundamental nature of soil, the cause of soil erosion, methods of saving the soil and maintaining its productivity, economics of soil conservation, farm planning for soil conservation, and soil management. The book is not a handbook of soil management practices.

CARL F. LAMAR,
Teacher Education,
Kentucky

A BIRD IS BORN by E. Bosiger and J. M. Guilcher. Sterling Publishing Co., 419 Fourth Avenue, New York 16, New York. 1960. 93 p. Price $2.50.

From the time the egg is laid until the chick breaks out of the shell, step by step changes are shown as the chick develops. There is a section on how a bird grows. Pictures indicate different ways baby birds are fed by their mothers.

C. C. SCARBOROUGH,
Teacher Trainer,
North Carolina

News and *Views* of the Profession

Schank to Supervisor Post

L. C. Schank
State Supervisor of
Vo-Ag—Nevada

MR. L. C. Schank has been appointed Supervisor of Vocational Agriculture in Nevada. He assumes this portion of the duties formerly performed by John W. Bunten. Mr. Bunten is now full-time Director of Vocational and Adult Education in Nevada.

Mr. Schank served as Vocational Agriculture Instructor for 27 years in the Churchill County High School at Fallon, Nevada. During that period he had three National FFA Officers, one Regional Star Farmer, eleven American Farmers and 78 State Farmers.

In 1956, Mr. Schank retired from teaching and was elected from Churchill County to serve in the State Legislature. In 1958 he served for a short period in Iraq on a foreign assignment.

To this new position, Mr. Schank brings a record of successful farm experience. He developed, during the years, an outstanding farm and dairy herd which his oldest son now operates. □

Elliott New Special Editor - -

Wallace H. Elliott

WALLACE H. Elliott, Head of the Agricultural Education Department at the University of Maine, will serve as a Special Editor for the North Atlantic Region. He replaces his colleague, Paul M. Hodgson, who has assumed other duties in the State of Delaware.

Elliott was reared on the family homestead in Aroostook County, Maine. He studied vocational agriculture in high school (1918-1922). In high school he was an officer of the Presque Isle Young Farmers Association. This association was a forerunner of the Future Farmers of America. He graduated from the University of Maine in 1926, taught vocational agriculture at Patten Academy for nine years, and served as principal during the last two years. In 1937, he received the M.S. degree from Cornell University and became Assistant State Supervisor and Teacher Trainer in Maine that September. He assumed his present duties at the University of Maine in 1947 where he now holds the rank of Professor and is a member of the Graduate Faculty.

Elliott has been a contributor to this magazine as a teacher of vocational agriculture and teacher trainer. He has served as President of the M.A.V.A.T. and the Maine Vocational Association. In brief, he has been associated with vocational agriculture for over forty years.

Wallace H. Elliott married Marie A. Watson, Georgetown, Massachusetts, in 1928, and they have one son, James V. Elliott, who is a graduate of the Maritime Forest Ranger School at Fredericton, New Brunswick. □

Region VI NVATA Vice-Pres.

Wenroy Smith

WENROY Smith was born and reared on a general farm in Lebanon County, Pa. Four years of vocational agriculture in high school led him to enroll in agricultural education at Pennsylvania State University where he was granted the B.S. degree in 1935. He received the M.Ed. degree from the U. of Pittsburgh in 1947.

Recognitions and honors include: President of Westmoreland County, Pa., Teachers Association for four years; member of Pa. State Education Association committees; life member of N.E.A.; Secretary-Treasurer of PVATA, 1959, and Vice-Pres., 1960; chairman, Legislative Committee of Voc. and Practical Arts Association, Pa. State Education Association, 1960; alternate Vice Pres., Region VI, NVATA, 1959.

W. Smith has had 25 years of teaching experience in three schools, with 20 years having been in one school. His family consists of his wife, Pauline, a specialist in guidance and home and school visiting; and a daughter, Sallie, who is now in the eighth grade. □

Region V NVATA Vice-Pres.

F. D. Johnson

FLOYD D. JOHNSON, agriculture teacher at York High School, York, South Carolina, was elected vice president of NVATA from Region V at the Philadelphia Convention in the summer of 1957. Region V comprises seven Southern States, Puerto Rico, and the Virgin Islands.

A native of North Carolina and a graduate of Clemson College, Mr. Johnson has taught agricuture at York High School for the past 21 years.

He received the B.S. degree in June of 1939 and the M.S. degree in January of 1960. Both degrees were received from Clemson.

He was married to the former Elizabeth Ann McCollum of McCall, South Carolina, in 1940. They have two sons, Bob 10 and Bill 6.

He has been very active in county, state, and national professional educational associations during his entire teaching career. He is a past president of the SCVATA, SCVA treasurer, and member of the SCVA Executive Committee. He attended his first AVA Convention in 1946. He has attended the last six consecutive NVATA and AVA Conventions. He has attended three FFA National Conventions.

Mr. Johnson is an active lay member of the Baptist Church. He is a civic leader in his community. He exerts much leadership in the various farm organizations in his area. He is known in South Carolina as one of the outstanding agriculture teachers in the state.

Region V has continued to move forward and make much progress in developing a strong NVATA program during the time Johnson has served as an officer in that region. He will complete his term as vice president of NVATA from Region V at the Los Angeles Convention. □

The Cover Picture

Spring warm-up on a Colorado ranch. Sheep shearers are becoming increasingly hard to find in many communities. This situation presents a challenge for vocational agriculture teachers in training vocational agriculture students and young farmers in this skill when needed. □

"We just give our blood? Shucks, farmers have been giving that for a long time," wisecracks Dennis Ficken, president of the West Plains FFA Chapter as he lets Laboratory Technician Bob Gleghorn prick his finger for a sample. Actually, members of the chapter were happy to become a part of the walking blood bank of West Plains Memorial Hospital this past week as a part of the chapter's observance of National FFA Week. At extreme left stands Reporter Larry Ball beside Sentinel Jim Taylor, while Secretary Richard Rumph looks on at right. (S. A. Douglass, Vo-Ag Instructor, West Plains, Missouri).

Floyd Johnson of York, S.C., Regional Vice Pres. of NVATA, talks with Representative Doyle Conner of Starke, Florida, concerning his candidacy for state commissioner of agriculture. Doyle is past national president of FFA and past Speaker of the Florida House. Warren Harrell (left) of Winter Haven, Florida, 1959 President of Florida FVATA, and Wayne Manning of Ponce De Leon, Florida, 1960 President of FVATA, look on.

Stories In Pictures

United States Congressman William M. McCulloch, of Piqua, presents winners of the Gettysburg Young and Adult Farmer 100 Bushel Corn Club with trophies. Left to right: Congressman McCulloch, Ronald Jones, and Robert Flory. J. D. McComas is Vocational Agriculture Teacher.

"Careers in Agriculture" is the topic of discussion between Gene Foster, vo-ag teacher at Whitesboro, Texas, and L. I. Samuels, area supervisor of vo-ag with the Texas Education Agency. Vo-ag teachers in two Texas counties have, in cooperation with the Department of Agricultural Education, Texas A & M College, assembled the necessary references to teach a unit on "Careers in Agriculture." These references, along with a teaching plan prepared by E. V. Walton and J. D. Gray of the Department of Agricultural Education at Texas A & M College, is then rotated among the cooperating teachers. Further information is available upon request.

(Photo by J. D. Gray)

Tolt-Carnation FFA, Carnation, Washington, Jacket story. H. Rothschild is holding his National FFA Band Jacket while Judy Davis, Chapter sweetheart, is wearing her new sweetheart jacket and holding the official chapter jacket. D. Jung, State FFA Reporter, is displaying two jackets he received—The State officer's jacket and the National Chorus jacket. (Photo—R. D. Walen, Vo-Ag Teacher)

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